<u>Opening Remarks for the Workshop on Digital Currency Economics and Policy, 15 Nov 2018</u>

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Distinguished speakers, central bank colleagues, ladies and gentlemen,

- Good morning,

- And welcome to the Workshop on Digital Currency Economics and Policy, jointly organised by the Asian Bureau of Finance and Economic Research, the NUS Business School, and the Monetary Authority of Singapore.
    - The ABFER was founded six years ago, and held its fifth annual flagship Conference in May this year. Some of you have attended as speakers and participants. We also organise more focused Workshops on specialised topics. Today's event falls in this category.
    - I want to acknowledge our co-organiser, Professor Bernard Yeung, Dean of NUS Business School and President of the ABFER, who has put tremendous effort into this workshop.

- Amid the frontline innovation of the Fintech festival, we thought it would be important to engage upstream, in an intellectual discourse on Digital Currency. And to anchor it on established paradigms in economics and finance. We need a more formal, internally consistent narrative on what is a fast-evolving development in the marketplace.

- In a sense, the concept of electronic money is not new at all. The US Federal Reserve started making transfers by telegraph in the 1910s. Credit cards that could be used to make payments electronically date back to the 1950s.

- However, these technological innovations were at root, just new and more efficient ways of effecting traditional payment transactions, but did not encroach on the monopoly of the monies in use.

- What is somewhat more novel, is the advent of digital assets that use encryption technology to control the *creation* of money and their transfer – the so-called digital currencies. The first of these appeared around 2008, and there are now over a thousand of them. The amounts of each in circulation vary with their fluctuating market values.

- Nov, innovation in money and credit goes to the very heart of central banking. Central banks are fundamentally concerned with the link between money of all kinds and inflation, and the ability of the financial system to efficiently and safely fund real economic activity.

- At the very outset, we are confronted with the question of what has driven the emergence of digital currencies. According to the UN, the world's 195 independent states already have 180 currencies between them. It is not obvious that we have a shortage of currencies.

- After all, John Stuart Mills did say that “so much barbarism, however, still remains in the transactions of most civilised nations, that almost all independent countries choose to assert their nationality by having, to their inconvenience and that of their neighbours, a peculiar currency of their own.”

- Of course, shortage of a specific currency that is used more than others, such as the US$, do occur from time to time, as witnessed by the occasional debates on the Triffin Dilemma, but to me that is a separate, allocative issue, perhaps.

- A theorist might see the emergence of alternative forms of private sector-created money as an effective way of disciplining governments to preserve the value of official money. Governments may be compelled to ensure they retain at least the lion’s share of the market for currency in order to secure their seigniorage revenue; and perhaps to enjoy the less quantifiable benefits of prestige and statehood associated with money issuance.

- Indeed, the privilege of currency issuance brings with it an enormous responsibility—in safeguarding the integrity of a country’s supply of money.

- But it seems hard to argue that concern over a debasement of currencies is behind the rise of digital currencies, given the low inflation record of central banks in the last few decades.

- There might be some real underlying demand for a new type of money that allows anonymity, although regulators are mindful that the enabling technology may inadvertently reduce the transaction costs of criminal activities and terrorism-related financing.

- Conversely, it may simply be that the distributed-ledger technology behind digital currencies allowed them to happen, and that what we have effectively is a supply-driven shock—or to put it differently as Ken Rogoff does, “a solution in search of a problem”.

- Whatever the underlying drivers, it appears that digital currencies are probably here to stay. In fact, the evolution of the digital currency phenomenon may have proceeded faster than academics’ and central banks’ understanding of the associated issues and implications.

- Today’s workshop is an attempt to catch up. To this end, we have gathered here today some of the keenest minds in the areas of monetary and financial economics.
    - We have Barry Eichengreen, who will motivate the issues, from a historical perspective on privately-issued currencies and the tendency for currency issuance to be concentrated in the hands of governments.
    - Markus Brunnermeier, Charles Engel, David Yermack and Franklin Allen will help us make sense of how digital currencies could alter the monetary and financial landscape, and what they imply for policies.
    - Robleh Ali will educate us on some technical design aspects of blockchains.
    - General Manager Agustin Carstens, MD Ravi Menon and Deputy Governor Cecilia Skingsley will share with us the key central bank considerations around the advent of digital currencies.
    - So we have a judicious mix of topics and approaches, from the historical to monetary theory, to financial structure, technology and policy.

- And the right assembly of people to apply the analytical toolkits. In fact, a room of academic greats in the discipline, the likes of which I doubt if I have ever seen. We are honoured, indeed.

- We will have the privilege of hearing from all these experts over the next two days including our Opening Speaker, Kenneth Rogoff. He is Professor of Public Policy and Professor of Economics at Harvard, and served as Chief Economist at the IMF from 2001 to 2003.

- Ken has made substantial and seminal contributions to issues closely related to central banking: exchange rates, central bank independence and financial crises. His work with Maury Obstfeld on developing a unified framework for analysing policy issues in international macro was path-breaking and had enormous influence on subsequent open economy modelling efforts.

- His regular syndicated columns have highlighted the value of the economic perspective on a range of pertinent issues and made them accessible to a broader audience. He is also a member of that pre-eminent Group of Thirty, chaired by the DPM.

- Ken is no stranger to Singapore, the MAS, and ABFER, having visited and spoken at our events on several occasions. I have also personally benefitted from the wisdom of his insights. It is a delight to be able to welcome him back again.

- Some of us would know that his proposal to scale back on paper money preceded the advent of crypto/digital currencies by about two decades, and was most recently reinvigorated in his 2016 book, *The Curse of Cash*.

- So I think it is most apt that he kicks off this Workshop.

- May I now invite Professor Kenneth Rogoff to make his presentation, please.

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